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ABSTRACT

The long-term results of a 32-hour interpersonal communication skills training program for unit staff in a large state psychiatric hospital were evaluated. The main goal was to improve staff effectiveness through systematic training in communication behaviors expressing empathy in staff-patient interactions. Staff outcome measures were turnover, self-reported symptoms of burnout, use of leave and overtime, and assaults and injuries from patients. Patient outcomes were staff perceptions of patient milieu, patient satisfaction, patients' rights complaints, numbers of restraints and seclusions, numbers of patients' attempts to leave, and recidivism rates. Two adult psychiatric units that received the training (72 staff members) were compared with 2 that did not (86 staff members). The Carkhuff Human Resources Development Model was the basis for the training. All staff completed the Maslach Burnout Inventory and the Ward Atmosphere Scale before and 6 months after the training. Analysis of covariance was used to compare the units, and a time series design using effect sizes compared the data on other outcomes. The trained units improved on staff and patient outcomes more than did the untrained units, even though not all staff members on the experimental units received the training. Trained staff showed substantial improvement in staff outcomes measured. Training costs were recovered by the sixth month after training. After 1 year, staff members still felt that the training had improved the way they responded to patients. Six tables present study data. (SLD)

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COMMUNICATIONS SKILLS TRAINING IN THE PUBLIC SECTOR: APPLYING THE CARKHUFF MODEL FOR PATIENT MANAGEMENT

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Abstract

The purpose of this study was to evaluate the long term results of a 32 hour interpersonal communication skills training program for unit staff in a large state psychiatric hospital. The main goal of the program was to improve the effectiveness of the staff through systematic training in communication behaviors demonstrating expressed empathy in staff-patient interactions. The main objectives were to improve both staff and patient outcomes. Staff outcomes measured were turnover rate, self-reported symptoms of burnout, use of leave and overtime, and assaults & injuries from patients. Patient outcomes measured were staff perceptions of patient milieu, patient satisfaction, patients' rights complaints, numbers of restraints and seclusions, number of patient attempts to leave (AWOL), and recidivism rates. A pilot program had already been completed with promising results in the reduction of burnout, specifically emotional exhaustion.

This quasi-experimental study matched two adult psychiatric units which received the training with two similar units as controls. The control units were not scheduled for training until a year later. All staff on these four units were asked to complete the Masloch Burnout Inventory and the Ward Atmosphere Scale before and six months after the experimental units received the training.

Analysis of covariance (ANCOVA) was used with the pretest as the covariate to compare the experimental and control units on the subscales of the tests. A time series design using effect sizes compared monthly data on staff use of leave, human rights complaints, etc. for the six months after training with data from the same six months from the previous year. Cost-benefit amounts were also calculated.

Although strong historical factors were at work, the trained units improved on both staff and patient outcomes more than the control units even though the goal of training 100% of the staff on the experimental units was not attained. Trained staff on the experimental units showed statistically significant improvement over the control units on the Personal Accomplishment subscale of the Maslach Burnout Inventory. Results from the Ward Atmosphere Scale showed statistically significant improvement on the (granting patient) Autonomy subscale. Three other patient milieu subscales improvements approached statistical significance. Staff outcomes improved substantially on both experimental units by reducing turnover, by using fewer hours of sick leave, annual leave, and overtime. On the experimental unit that happened to be a long term unit, patient satisfaction improved and there were fewere patient's rights complaints and incidents of AWOL's despite an increase in restraints and seclusions overall.

When a cost-benefit analysis was applied, the training costs were recovered by the sixth month after training. A year later when all had received the training, a staff survey showed that 88% of the respondents felt that the training had changed the way they responded to patients. (An additional 6% claimed that they

were already using these skills, but praised the training program anyway.) Generalization to other interactions may have also occurred in these respondents as 82% said that it had changed the way their work group responded to each other. Our results suggest that training in empathetic communication skills for direct care staff is promising as a proactive, cost effective approach to coping with staff burnout and turnover rates. In addition, it appeared to have positive effect on both staff and patient-related outcomes in a mental health setting.

COMMUNICATIONS SKILLS TRAINING IN THE PUBLIC SECTOR:
APPLYING THE CARKHUFF MODEL FOR PATIENT MANAGEMENT

The purpose of this study was to systematically evaluate the long term results of a 32 hour interpersonal communication skills training program for unit staff in a large state psychiatric hospital. Other, cost-benefit objectives were to determine if six months after the completion of the training there were lasting effects in the following areas: (a) reduction in symptoms of burnout, (b) change in staff perception of the therapeutic milieu, (c) increase in positive patient-related outcomes.

State psychiatric hospitals have been included in recession-induced funding cuts while patient admissions have been rising. Although institutional staff training budgets were relatively untouched (1), money spent on staff training needed to be justified based on its costs and benefits. With fewer staff to serve more patients (who by all accounts were more needy), effective staff training in patient management was needed to improve staff retention, staff skills, and patient outcomes.In our case three factors were especially significant: a) a high staff turnover rate, b) continuous quality improvement mandated by regulatory agencies, and c) focus on service outcomes (2).

In the case of psychiatric service industries, interpersonal communication skills are also technical skills. Furthermore if the new skills were generalized to

other than staff-patient interpersonal behavior, relationships between the staff members as a work unit and between the staff member and his or her family might also improve. All levels of mental health professionals from ward attendants to psychiatrists were expected to benefit from improvement in their communication skills (3).

Applying the Carkhuff Model

Interpersonal communication skill is a key element in demonstrating competence in any service industry, and in 1991 from 55% to 63% of staff training expenditures in health services were focused on this area(1). The Carkhuff Human Resource Development Model was the basis for the training in this study. Communication patterns which stress the development of listening and verbally responding in an empathetically accurate manner were a significant component of this program. Psychiatric hospitals are intended to be institutions of caring and compassion within a therapeutic milieu characterized by acceptance, dignity, and respect (4). The core of this milieu is the patients perception of being understood (5). Empathetic understanding has been demonstrated to be crucial to patient compliance with treatment (6). Carkhuff maintained that without empathy there is no basis for helping (7).

Helping behaviors have been shown to be motivated by emotional empathy, which (if not mediated cognitively) has

been shown to be predictive of burnout (8). Burnout has only recently become an accepted construct by researchers of organizational stress (9). Freudenberger's operational definition of burnout is exhaustion from excessive demands on energy resources (10). Persons suffering from emotional exhaustion have been described as apathetic, psychologically and emotionally withdrawn, cynical, and less empathetic.

Guiding hypotheses

Our first hypothesis was that symptoms of burnout such as emotional exhaustion, depersonalization, and feelings of ineffectiveness could be lessened by training staff to use specific interpersonal communication skills. These skills focus on accurate expressions of empathy based on understanding both the cognitive and emotional content of the speaker's words. The second hypothesis was that costly staff turnover would be reduced. The last hypothesis was that patient, staff and milieu outcome factors should improve (continuous quality improvement). For example, there should be fewer reported patient rights violations, less use of sick leave, and fewer staff-patient incidents if these interpersonal communications skills increased staff effectiveness.

Methods

Subjects

Before this program began, a pilot program was conducted with 37 staff volunteers who were invited to

participate (11). From this group, 11 staff were selected for further training for the purpose of eventually training other staff. A commitment was made to train all staff over a two year period. The target group therefore was over 700 current staff positions, plus new staff as they were hired in an on-going program. Subjects for this study were all staff on the four adult psychiatric units, approximately 160 positions.

Procedures

The training program focused on developing accurate empathy by teaching staff appropriate cognitive and emotional components of interpersonal (specifically staff-patient) communication. The systematic staff training program used for this project was developed for use with personnel working in correctional settings (12). It was then specifically modified for use with mental health professionals. It was a 32 hour program completed in four all day sessions at the rate of one per week. There is a cognitive component with role-playing as a major element to allow the trainee to practice, receive feedback, observe others, and be praised for correct empathetic listening and speaking behaviors.

The workplace specific interpersonal communication skills addressed by this training program consist of listening, responding, and making requests while

demonstrating respect and empathy for the patient (13). The basic skill is attending and listening to the patient in order to understand his or her mental state. Attending skills include specifics in body language such as correct positioning and posture. The trainees are taught to verbally respond first by rephrasing the content of what the patient said and then to respond by reflecting the feelings that the patient may be trying to communicate. Next staff are taught how to handle a request from a patient in a respectful manner. This includes checking out the request, then responding with a rationale for their decision. Another skill taught is how to make a request of a patient which will most likely result in cooperation or compliance. The last skill taught is how to give verbal and non-verbal reinforcement. This may be encouragement or verbal approval of a patient's behavior. Or it could be verbal feedback such as a warning that the behavior is not appropriate and that an undesirable consequence may follow if the behavior does not change.

Research Design

A pretest/posttest quasi-experimental design was used. Two units received the training first over a six month period. The other two units served as controls. One random assignment was possible. Two of the units were identical in size and function and we chose to use these for matching

purposes. They were two units which served recidivist patients. One served as an experimental group (N = 35 staff) and the other as a control group (N = 37). The other two adult psychiatric units consisted of a longer stay unit (N = 49) with a patient population of chronically mentally ill persons and a first admission unit (N = 37) for patients new to the system (for many it is their first hospitalization). The long stay unit asked for and received the training as our second experimental unit based on the participation of five of their staff in the pilot project. In this unit, the peer trainers served as role models on the premises as well as skills trainers. They actively encouraged the use of the new skills in day to day unit and put up posters to remind staff of specific skills to use. The administrator of the first admissions unit agreed to serve as a second control unit. Non of the other hospital units were as comparable as they were smaller specialty units. Staff from both control units were subsequently trained in the second year of this program.

Ten staff trainers actually conducted the training; three were from the long term unit staff as previously mentioned, one was from the first admission unit, none were from the two recidivist units, two were from other specialty units, and the other four were from the Human Resources Development department who were directly involved in staff training as part of their job. All staff were asked to

complete the Maslach Burnout Inventory (14) and the Ward Atmosphere Scale (15) prior to the start of training and again a year later before the control units began the training. Released time was given to complete the questionnaires which took about one hour and efforts were made to schedule times and places convenient for all shifts. Released time was also given to staff for the all day training sessions which were held in a separate building which serves as a staff development center.

In addition, data was gathered from customary monthly statistical reports for the six months prior to training (July 1990 to December 1990) and the six months after training (July 1991 to December 1991) in an interrupted time series design. Comparisons were made in effect size measurements. The mean of the six month prior to training was subtracted from the mean of the six months after training and the results was divided by the standard deviation of the pretraining data. The result is a z-score which can show the changes in the data while taking the variations into consideration. For example, an effect size indicating a positive change of +1 moves the mean from the 50th percentile to the 84th percentile in a normally distributed population. Effect sizes are independent of the scale upon which the data was measured and are a good way to standardize change scores so comparisons can be made.

Results

In the initial training interval from April until June of 1991, there were 16 of 35 staff (46%) who had completed the training from the recidivist pair of units. The long stay unit had 32 of 49 staff (65%) finish the training. A total of 146 of 158 staff (92%) completed the pretest questionnaires. The number completing the postest questionnaires was 132 (84%). The number of staff taking both the pretest and posttest was 83 (52% of the original staff). Most of our results presented are based on these staff. Employee turnover (n = 18 resignations plus 10 inhouse transfers) and inadequate staffing on these units were probably the main factors limiting the number of participants in the training. The high return rate for the questionnaires may indicate that employee motivation to participate was high even though the goal of having 100% of both experimental units completely trained in three months was not met.

Reduction in Symptoms of Burnout

Turnover Data. The turnover in the followup period was nearly four times higher for the untrained group than for the group that received the training. From the time the training began in April 1991 until the posttest was given in December 1991, only 2 of 48 staff who had received the 32 hours of training had resigned. In contrast, 16 of the remaining 110 staff had resigned.

There was quite a bit of turnover on the two recidivist units. The unit (E1) which received the training had 9 of 35 (26%) staff who worked there in April, resign or transfer to other units at GRHA. The two trained staff who resigned came from this unit. The control unit (C1) had 12 of 37 (32%) resign or transfer. The actual number of resignations for both units was the same, n = 7.

The other units (E2 and C2) had much less turnover. The long stay unit (E2) had 4 of 49 staff (8%) resign (none of these had received the training) but no transfers. The first admission (C2) unit had no resignations but 2 of 37 staff (5%) had transferred to other units.

Burnout Inventory Results. There were no differences in the pre and posttest scores for the paired recidivist units, but there were significant differences showing that the interpersonal communications training might have mitigated burnout on the long stay unit where 63% of the staff had been trained. The results that are presented include only scores for the staff from the four units who completed both pretest and posttest questionnaires. An analysis of variance on the pretest scores found no statistically significant differences between the means of the four units on any of the three subscales of the Masloch Burnout Inventory . These subscales measure Emotional Exhaustion, Depersonalization, and Personal Accomplishment.

Although we did not duplicate our pilot test results which showed a decrease in Emotional Exhaustion scores for the trained group immediately after the completion of training, there was a statistically significant difference in the means of the Personal Accomplishment scores six months after training. See Table 1. This subscale assesses feelings of competence and successful achievement in one's work with people. The difference was found to be between the higher mean for the second comparison pair. The long stay unit (E2) scored 4 points higher on the posttest while the first admission unit (C2) scored 3 points lower than they did on the pretest. Scores on the Emotional Exhaustion subscale either stayed the same or rose somewhat on the four units, and scores on the Depersonalization subscale rose somewhat for all units except for the long stay unit (E2) where it was slightly lower.

Ward Atmosphere Scale (WAS) Results. Analysis of covariance (ANCOVA) using the pretest as a covariate found a significant difference between the four units on the Autonomy subscale, $F = 4.29$, $p = .01$. The mean for the long stay unit (E2) was higher than the means of the other three units in the study. Three other subscales also showed differences that approach significance. See Table 2. In each of these four subscales, the largest difference between the means were between the long stay unit (E2) and the first admission unit (C2) serving as its control. However on the

Support and Spontaneity subscales, both of the experimental units scored higher than their controls. On all ten subscales, the experimental units scores changed in the desired direction. This was not the case for the control units. The long stay unit (E2) outscored the other three on the majority of the subscales.

Analysis of covariance requires equal numbers of subjects in each group. The smallest group that took both the pre and post version of the WAS was from the recidivist control unit (n = 13). To achieve equal numbers in the four groups, the scores of 13 staff from each of the other three units were matched by position, ie. each sample had the same number of attendants, nurses, and social work staff. A table of random numbers was used to determine which scores were used or discarded.

When independent t-tests between the trained and untrained staff were done on all ten subscales using scores from the 132 staff who completed the posttest, the results were that statistically significant differences were found on the three subscales that make up the Relationships dimension of the WAS. That is, the trained staff perceived that their units were much better in Patient Involvement, Supportiveness, and Spontaneity (openness). In addition, a statistically significant decrease was found in the subscale measuring the perceived amount of necessary staff control. These results support the conclusion that these trained

staff perceived the therapeutic milieu like that of teaching hospitals (15). However, posttest only comparisons do not rule out preexisting differences such as the volunteer phenomenon. The staff who readily took both the training and the posttest may have been more motivated or more skilled prior to training.

Time Series Results. A comparison of the means of the six months preceeding the training and the six months immediately after training did indicate more improvements in the experimental units in terms of both patient and staff outcomes. There were reduced patient reports of human rights violations, decrease in number of patients leaving without being discharged(AWOL), and fewer criticisms of staff on patient satisfaction surveys. The staff outcomes improvements consisted of fewer resignations, reduction in staff use of both sick leave and annual leave. See Table 3.

In addition, the long stay unit (E2) also showed gains in the patient satisfaction survey questions which asked if they thought that this hospitalization had helped them feel better, if they had been treated respectfully, and if the staff was helpful or answered their questions satisfactorily. Overall, the trained units showed positive improvement in more indicators than the control units, and the long stay unit (E2) improved the most. The actual data for the recidivist comparison units is in Table 4.

Outside Events. Many adverse factors happened during the time period of this study that negatively impacted society, patients and staff alike. During the six months of pretesting and training, there was a war in the Persian Gulf calling up some employees and some family members who were in the Reserves. During the six months after the training was completed, (July 1991 until December 1992) both the national and local economy continued to decline, all state budgets were cut, there was a threat of a mandatory day off without pay, and a hiring freeze was imposed for all but direct care staff. See Table 5 which shows basic demographic data for the units in this study. In addition, the number of admissions rose 19% in the first admission unit (C2) and 8% to 7% on the two recidivist units (E1 and C1). Many of these patients were more needy and more severely ill evidenced by the increase in violence (see Table 3, Restraints & Seclusions) and the increase in the number of patients who were readmitted within 30 days of discharge. Of this recidivist population, a check revealed that 27% had a dual diagnosis of substance abuse (especially "crack" cocaine) concurrent with their mental illnesses. These historical factors make comparisons difficult; but the control units, especially the matched recidivists units (E1 and C1) provide a counter to these threats to the validity of our results.

Cost-Benefit Analysis. This interpersonal communication package may prove to be quite cost-effective, despite the quasi-experimental nature of this study. The savings using the controls for comparison, showed that the training paid for itself plus $13,000 during the six months we collected posttest data. The patient and staff factors in Table 3 lent themselves to a cost comparison between the experimental and control units. With the exception of the patient satisfaction survey results we were able to compute at least a minimum monthly cost per indicator. For example, each resignation meant recruiting, hiring, and a month's orientation and training for the replacement. We multiplied this figure times the monthly average for the six months prior to the training and for the six months after the training. See Table 6.

The difference between the recidivist units (E1 & C1) was dramatic. E1 reduced expenses $8,953 per month while C1 spent $5,002 more. The difference between the two units was $13,955 for each month of posttest data (total after six months was $83,730). The difference between the second experimental pair was less dramatic. The long stay unit (E2) saved $2,807 while the first admission unit (C2) saved $1119, or a difference of $1,688 ($10,128 for six months).

We were able to estimate the costs of the training also. Startup costs for our pilot project, reported on elsewhere, cost $64,590. Excluding these startup costs, the

cost to train a staff member was $601 (including their salary). Therefore to train 57 staff (5 were trained in the pilot program and 2 resigned) it cost $34,257 plus startup or $98,847. This was only $5,000 more than the total cost benefit for the six months, which was $93,858. When the startup costs are prorated over all 711 positions in the hospital, the cost-benefits will greatly increase.

Staff Satisfaction with Training. One year after the completion of the training, a survey was mailed to staff who were still employed and who had responded to either the pretest or the posttest or both. About 150 surveys were sent out with 52 returns. By this time staff on all four units in this study had received the training. The results were overwhelmingly positive. 88% said that the training changed the way they responded to patients. Six percent more said that they had learned these skills earlier in their professional preparation, but were very positive about the value of the training. 86% said that patients were more cooperative when this empathetic approach was used. 82% said that they thought they showed more empathy towards patients. 82% said that the training changed the way their work group (peers) communicated with each other.

About one third of the respondents made comments. They wanted refresher courses, they wanted to be more consistent to "make empathetic responses a natural part of me", and they wanted to have observers give them feedback about their

"good and not so good" efforts in communication with patients. They suggested that all new staff receive the training as soon as possible, that the patients receive communications skills training too, and that a brief written manual that they could study on their own would be helpful. Finally, a staff member who had been with the hospital for 22 years wrote that he or she had been to many staff training sessions but that this was the best, "I can actually use the techniques with my recipients and see 'positive' results. Thank God for Blakeman".

Conclusions

This study offers support that training in Interpersonal Management Skills, specifically communication skills demonstrating accurate empathy behaviors, may reduce or mitigate symptoms of burnout in psychiatric hospital staff. Furthermore, receiving training with peers or having peers who are trainers, may have multiplicative effects that reduce turnover. In addition, improved interpersonal communication skills may benefit the therapeutic milieu in ways that improve both staff and patient control over outcomes. Patient outcomes may improve more on long stay units where the staff interact longer with chronically mentally ill patients. Staff outcomes may be more dramatic on short-stay, high turnover recidivist units with high stress levels due to dually diagnosed or more violent patients.

Our results suggest that training focused on improved empathetic communication skills in direct care staff is promising as a proactive, cost effective approach to coping with unacceptably high staff turnover rates and to increase positive patient-related outcomes. Due to the quasi-experimental nature of this study, further research is necessary to confirm these findings and to better link such training with cost benefits.

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TABLE 1

Masloch Burnout Inventory

		Emotional Exhaustion		Depersonalization		*Personal Accomplishment	
Unit	N	Pre	Post	Pre	Post	Pre	Post
E1	16	18.9	18.8	4.6	6.0	38	35
C1	14	14.8	20.8	5.8	7.1	34	35
E2	24	15.6	18.3	6.1	5.9	36	40
C2	26	20.1	20.0	5.4	6.5	38	35

*Pretest F=.67, p=.57; Posttest F=2.89, p=.04, Tukey HSD q=3.7, p=.05

TABLE 2

Ward Atmosphere Scale ANCOVA Results

Unit	N	Autonomy Mean	Order & Org. Mean	Support Mean	Spontaneity Mean
E1	14	3.6	6.3	6.5	6.0
C1	14	3.8	6.4	6.1	5.5
E2	14	5.1	6.7	6.4	6.2
C2	14	3.2	5.0	5.2	5.0
	F =	4.29	2.36	2.23	2.14
	p =	0.01	0.08	0.10	0.11

TABLE 3

EFFECT SIZES RE LONGTERM BLAKEMAN TRAINING FOLLOWUP

GROUP/UNIT	E1	+	C1	+	E2	+	C2	+
PATIENT FACTORS								
# HUMAN RIGHTS COMPLAINTS	0.82	Y	1.34	N	0.88	Y	0.56	Y
# RESTRAINTS & SECLUSIONS	0.42	Y	3.89	N	0.88	N	0.79	N
# AWOLS PER MONTH	0.36	Y	1.69	Y	1.19	Y	1.7	N
#30 DAY RECIDIVISTS	1.73	N	3.42	N	0.06	N	0.16	Y
PSS–HAVE CRITICISMS	0.92	Y	1.22	Y	1.47	Y	7.21	N
PSS–TREATED RESPECTFULLY	1.06	N	0.67	Y	0.33	Y	0.51	Y
PSS–HAVE COMPLIMENTS	1.12	N	5.23	N	3.9	N	2.23	Y
PSS–STAFF HELPED/ANS QUES	1.26	N	0.66	N	0.29	Y	1.28	Y
PSS–FEEL HOSPITIAL HELPED	3.09	N	0.47	N	0.82	Y	0.67	Y
STAFF FACTORS								
RESIGNATIONS	1.3	Y	0.13	N	0	Y	0.7	Y
HOURS OF SICK LEAVE USED	1.15	Y	0.19	Y	1.13	Y	0.27	N
HRS OF ANNUAL LEAVE USED	1.06	Y	0.15	N	0.64	Y	0.04	N
# ASSAULTS ON STAFF	0.19	Y	1.25	Y	0.14	Y	0.82	Y
HRS OF OVERTIME USED	0.37	N	0.52	N	0.18	Y	3.34	N

+ this column indicates whether (Y) or not (N) the change occurred in the desired

TABLE 4

AVERAGES FROM MONTHLY DATA REPORTS

GROUP	READMISSION EXPERIMENTAL UNIT		READMISSION CONTROL UNIT	
TIME PERIOD (JUL – DEC)	PRE (1990)	POST (1991)	PRE (1990)	POST (1991)
PATIENT FACTORS				
#AWOLs	1.7	1.2	1.8	0.67
# HUMAN RIGHTS COMPLAINTS	1	0.3	0.2	0.7
# RESTRAINTS & SECLUSIONS	20	14	19	38
#30 DAY RECIDIVISTS	13	19	13	18
PSS – TREATED RESPECTFULLY	91%	83%	92%	93%
PSS – STAFF HELPED/ANS QUES	89%	86%	90%	88%
PSS – FEEL HOSPITIAL HELPED	87%	77%	87%	83%
PSS – HAVE COMPLIMENTS	30%	17%	37%	8%
PSS – HAVE CRITICISMS	13%	5%	26%	15%
STAFF FACTORS				
RESIGNATIONS	1.8	0.7	1.3	1.5
HOURS OF SICK LEAVE USED	245	176	203	190
HRS OF ANNUAL LEAVE USED	325	87	234	252
# ASSAULTS ON STAFF	0.8	0.7	2.2	0.8
HRS OF OVERTIME USED	21	35	45	63

TABLE 5

DEMOGRAPHIC DATA

GROUP/UNIT	E1	C1	E2	C2
NUMBER OF BEDS	43	45	60	36
ADMISSIONS/MO (AVG)	92	93	38	105
INCREASE OVER FY90	8%	7%	0	19%
OCCUPANCY RATE (AVG)	90%	83%	100%	93%
LENGTH OF STAY (AVG)	11	10	86	8
NUMBER OF STAFF	35	37	49	37
PERCENT TRAINED	40%	0%	63%	0%

TABLE 6

COST–BENEFIT ANALYSIS PER MONTH

GROUP	READMISSION EXPERIMENTAL UNIT		READMISSION CONTROL UNIT	
TIME PERIOD (JUL–DEC)	PRE (1990)	POST (1991)	PRE (1990)	POST (1991)
PATIENT FACTORS				
# HUMAN RIGHTS COMPLAINTS	$615	$185	$123	$431
# RESTRAINTS & SECLUSIONS	$2,880	$2,016	$2,736	$5,472
RECIDIVISTS FOR ONE DAY	$2,691	$3,933	$2,691	$3,726
# AWOLs	$177	$125	$187	$73
STAFF FACTORS				
RESIGNATIONS	$5,893	$2,292	$4,256	$4,911
HOURS OF SICK LEAVE USED	$4,415	$3,172	$3,658	$3,424
HRS OF ANNUAL LEAVE USED	$5,857	$1,568	$4,217	$4,541
# ASSAULTS ON STAFF	$46	$41	$128	$46
HRS OF OVERTIME USED	$436	$727	$935	$1,309
MONTHLY TOTALS	$23,010	$14,057	$18,930	$23,932
DIFFERENCE	SAVED	8953.06	SPENT	–5001.66
GROUP	LONG STAY EXPERIMENTAL UNIT		FIRST ADMISSION CONTROL UNIT	
TIME PERIOD (JUL–DEC)	PRE (1990)	POST (1991)	PRE (1990)	POST (1991)
PATIENT FACTORS				
# AWOLs	800.8	332.8	31.2	124.8
# HUMAN RIGHTS COMPLAINTS	$818	$308	$1,046	$510
# RESTRAINTS & SECLUSIONS	$4,920	$6,024	$1,584	$2,304
RECIDIVISTS FOR ONE DAY	$1,346	$1,381	$1,277	$1,174
STAFF FACTORS				
RESIGNATIONS	$3,274	$3,274	$4,911	$2,717
HOURS OF SICK LEAVE USED	$7,028	$5,298	$3,883	$4,253
HRS OF ANNUAL LEAVE USED	$8,523	$6,974	$2,793	$2,829
# ASSAULTS ON STAFF	$58	$48	$116	$39
HRS OF OVERTIME USED	$831	$685	$395	$1,059
MONTHLY TOTALS	$26,798	$23,991	$16,005	$14,886
DIFFERENCE	SAVED	2807.11	SAVED	1119.18